

#### **ABSTRACT OF THE DISCLOSURE**

Methods of reducing the effects of measurement device artifacts on a measurement of a sample are presented. A number of reference measurements performed with the measurement device are observed to identify reference independent components of the reference measurements. The variations of the  
5 reference independent components are used as surrogates for possible artifacts of the measurement device. A number of measurements of subjects similar to the sample are observed, and similarity components of the subject measurements that vary in a manner similar to the reference independent components may be identified. The sample measurement is then adjusted to remove at least part of the similarity components that correspond to the variations in the reference independent components. The  
10 adjustment of the sample measurement is thereby improved by reducing the effects of artifacts of the measurement device.